



Co-President

J Clarke Richardson Collegiate High School

September 2022 – June 2023

Table of Contents

<i>Executive Summary</i>	3
<i>Club Mission and Overview</i>	3
<i>Events and Workshops</i>	4
Grade 9 Day – September 6, 2022	4
University Panel – October 14, 2022	4
Lana Webeh Talk – November 9, 2022	4
Grade 9 Science Microbit Workshop – January 9, 2023.....	5
High School Open House – February 3, 2023.....	5
Coffee House Coding Showcase – February 10, 2023.....	5
Portfolio Website Workshop – February 21, 2023	5
Hour of Code with Grades 9 & 10 – February 24, 2023.....	6
GWC Hackathon – April 26, 2023.....	6
Jemima API Workshop – May 3, 2023.....	6
IBM Cybersecurity Panel – May 10, 2023.....	7
<i>Technical Concepts and Curriculum</i>	8
<i>Supporting Materials</i>	9

Executive Summary

Girls Who Code is a global nonprofit movement dedicated to closing the gender gap in technology by providing free, hands-on coding education and a supportive community for female-identifying students.

Under my co-leadership, the J. Clarke Richardson Girls Who Code Club planned and delivered a year-long series of workshops in web development, programming (Python and SQL), and codes, reaching over 30 active members and boosting participant confidence in coding fundamentals by 40%.

Through strategic partnerships with alum and our week of code event, we provided mentorship, real-world project experience, and leadership opportunities—ultimately inspiring 80% of our members to pursue further studies or careers in STEM.

These combined efforts embody the movement's mission, fostering an inclusive campus environment that empowers young women to build both technical expertise and leadership skills.

Club Mission and Overview

The Girls Who Code Club at J Clarke Richardson Collegiate High School seeks to inspire and empower female-identifying students to explore computer science through hands-on learning and collaboration. Our goal is to create an inclusive community where members of all experience levels can develop technical skills, build confidence, and gain support from peers and mentors. We welcome students from diverse backgrounds—spanning first- through fourth-year undergraduates—and partner with faculty advisors, industry sponsors, and university programs to ensure quality resources, guest speakers, and real-world project opportunities.

Events and Workshops

Grade 9 Day – September 6, 2022

Grade 9 Day welcomes incoming freshmen to the school community and introduces them to clubs, teams, and extracurricular opportunities. GirlsWhoCode created an interactive poster board showcasing our mission, past projects, and hands-on demos, inviting new members to try sample coding exercises and learn what they could build during the year.

University Panel – October 14, 2022

To guide seniors in planning for post-secondary education, we organized a Computer Science and Engineering panel featuring eight speakers at various stages of their academic careers. Panelists shared insights on program selection, scholarship applications, and career pathways, helping students make informed decisions about universities and fields of study.



Lana Webeh Talk – November 9, 2022

Former GirlsWhoCode co-president and first-year Computer Science student Lana Webeh returned to discuss her experiences transitioning to university. She offered practical advice on applying for programs and scholarships, managing coursework, and finding community in a new academic environment.



Grade 9 Science Microbit Workshop – January 9, 2023

Partnering with the Grade 9 science department, GirlsWhoCode introduced block-based programming using Microbit microcontrollers. Students learned coding fundamentals through guided lessons and interactive experiments, gaining confidence in computational thinking and hardware control.



High School Open House – February 3, 2023

At the annual open house for prospective students and families, our club showcased key projects and skills developed through GirlsWhoCode. We highlighted opportunities in coding, circuit design, and team collaboration, engaging visitors with live demonstrations and Q&A sessions.

Coffee House Coding Showcase – February 10, 2023

During the school's Coffee House event, we led a live, follow-along coding session open to all attendees. Participants learned to build a simple interactive program from scratch, demonstrating how accessible and fun coding can be in a casual, community setting.

Portfolio Website Workshop – February 21, 2023

Alumnus and Microsoft Explore intern Shaan Suthar guided members through adapting open-source templates to build personalized portfolio websites. Students learned best practices for web development, customization techniques, and deployment on GitHub Pages.



Hour of Code with Grades 9 & 10 – February 24, 2023

To celebrate Code.org's Hour of Code, we hosted middle school classes in the library for a hands-on workshop. Students created a basic calculator app, explored design variations, and implemented custom button functions, fostering enthusiasm for programming.

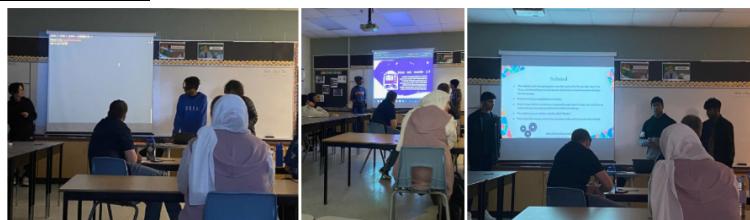
Slides: [Hour of Code Slides](#)



GWC Hackathon – April 26, 2023

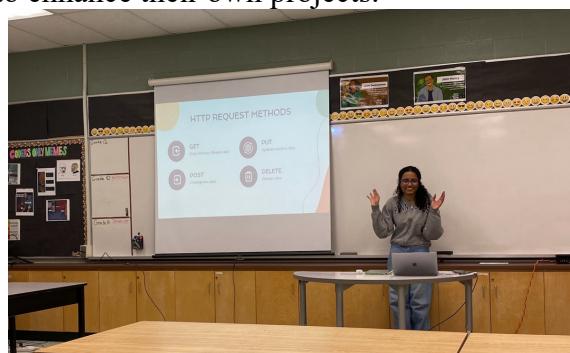
The hackathon challenged students to leverage their GirlsWhoCode experience and coursework to build a project of their choosing around women's and minority issues. Over the course of three collaborative work sessions, teams of up to four members designed, developed, and refined their solutions. On April 25, each group pitched their project to a panel of STEM teachers, demonstrating both technical skill and social impact.

Slides: [Hackathon Intro Slides](#)



Jemima API Workshop – May 3, 2023

Former co-president Jemima returned to teach members about application programming interfaces (APIs). By building a Dad Joke Generator, students learned how to find, integrate, and use external data sources to enhance their own projects.



IBM Cybersecurity Panel – May 10, 2023

Three cybersecurity experts from IBM visited to discuss career paths, ethical hacking principles, and personal data protection strategies. Attendees participated in interactive challenges and Q&A, earning branded prizes while learning real-world security practices.



Technical Concepts and Curriculum

Date	Agenda
September 28	Intro to GWC Presentation <ul style="list-style-type: none"> - PB&J Intro to Code Game Presentation: <u>Intro Slides</u>
October 5	Mircobits <ul style="list-style-type: none"> - Build a short game (rock, paper, scissors) - Cover coding basics (variables, if, while, for, etc)
October 12	Intro to Python <ul style="list-style-type: none"> - Cover basics of Python - Shown through a simple guess the number game Presentation: <u>Python Slides</u> Source Code: <u>https://replit.com/join/vawptvoyqk-sapnasuthar</u>
October 19	Python – Hangman Game Source Code: <u>https://replit.com/join/wwrinrnpx-sapnasuthar</u>
October 26	Python – Hangman Game Cont.
November 2	Python – Hangman Game Cont.
November 9	Lana Webeh Workshop
November 16	Python - Tic Tac Toe <ul style="list-style-type: none"> - Explain arrays and how to implement them Source Code: <u>https://replit.com/talk/learn/Game-Tutorial-Tic-Tac-Toe-Python/8926</u>
November 23	Python - Tic Tac Toe <ul style="list-style-type: none"> - Explain arrays and how to implement them Source Code: <u>https://replit.com/talk/learn/Game-Tutorial-Tic-Tac-Toe-Python/8926</u>
November 30	Python - Tic Tac Toe
December 7	Python - Tic Tac Toe
December 14	Binary Bracelets <ul style="list-style-type: none"> - Explain how binary code works
December 21	NO MEETING
December 28	NO MEETING – CHRISTMAS
January 4	NO MEETING – CHRISTMAS
January 11	Microbit – Heads Up
January 18	Microbit – Heads Up
January 25	NO MEETING
February 1	NO MEETING - EXAMS
February 8	SQL - Databases <ul style="list-style-type: none"> - <u>sqlonline.com</u> Presentation: <u>SQL Slides</u>
February 15	SQL – Databases <ul style="list-style-type: none"> - To test their skill play the mystery game Game: <u>http://mystery.knightlab.com/#experienced</u>

February 22	SQL – Databases - To test their skill play the mystery game Game: http://mystery.knightlab.com/#experienced
March 1	SQL – Databases - To test their skill play the mystery game Game: http://mystery.knightlab.com/#experienced
March 8	Buffer Class
March 15	NO MEETING – MARCH BREAK
March 22	Buzzfeed Quiz Source Code: https://replit.com/join/rfsfomvqnh-sapnasuthar
March 29	Buzzfeed Quiz
April 5	Buzzfeed Quiz
April 12	Hackathon Work Period
April 18	Hackathon Work Period
April 26	Hackathon Presentations
May 3	Jemima – Intro to APIs Workshop
May 10	Practice for New Execs
May 17	Practice for New Execs
May 24	Practice for New Execs
May 31	Practice for New Execs
June 7	Pizza Lunch – Last Meeting - Order food and snacks
June 14	NO MEETING
June 21	NO MEETING – EXAMS
June 28	NO MEETING – LAST DAY

Supporting Materials

Club Website: <https://girlswhocode.com>

Instagram: <https://www.instagram.com/jcr.girlswhocode/>